WHITE CROSS
MISSION

After Ceaucescu's death in 1990 over 120,000 children were discovered living in grim institutions. In the county of Jud Bihor in Western Romania, children who had been assessed as 'mentally retarded' at the age of three were sent to an institution in the country village of Cadea. They were housed in old buildings that had broken windows and no heating or plumbing. It was dark and dirty and for the majority of the time the children were confined to their cots. Most of them were tied to the bars by strips of cloth tied tightly around their wrists and ankles.

The children were always dirty, hungry and cold - sixty to seventy died every winter. Their original 'retardation' was the result of early illnesses such as pneumonia and bronchitis, and years of confinement at Cadea only compounded the problem. When they were finally released in January 1991, many could neither walk nor speak. All of the children rocked backwards and forwards in their distress; their eyes were glazed and unseeing. On release, many of the children were sent to hospital buildings in the mountain villages of Remeti and Bratca. It is here that the White Cross started assisting the local Romanian staff in their care.

Since the White Cross has been working with the children, over 600 people have travelled with the Mission to Romania. Some have only been able to give a few days of concentrated work, most average two months and one stayed for four years! Some work with the children, others repair the buildings and yet others deliver goods. Every volunteer is special. They raise their own money for air and train fares, insurance, food and electricity and more than half of them do it all over again and go out for a second or even third time. Old or young, with or without qualifications, the combined work and presence of these many different people has had an amazing impact on the children.

Children with blank, unseeing eyes, rocking in a world of their own are now healthy, laughing and boisterous. The accumulative effect of the White Cross volunteers with their mixture of naivety and experience, their energy, their perseverance, their hopes, their dreams and their many different ways of showing love has created a rainbow effect of bouncy, confident and individual children.

Fundatia Crucea Alba has helped White Cross Mission with the legalities of purchasing small farms, employing assistants and moving children from the mental institutions in order to live a normal family village life. We intend that these farms will be the children's homes for as long as they need. All their lives if necessary.

Buying the farms is only the beginning of a lifetime commitment to those children we take out of State care. Without a regular financial safety net we would be irresponsible if we established too many homes. We do, however, believe that this is the only way forward and are desperate for substantial funding.

The White Cross Mission is a Charitable Trust Registered in England No 1021176

52, Gwel-an-nans, Probus, Cornwall, TR2 4ND, United Kingdom

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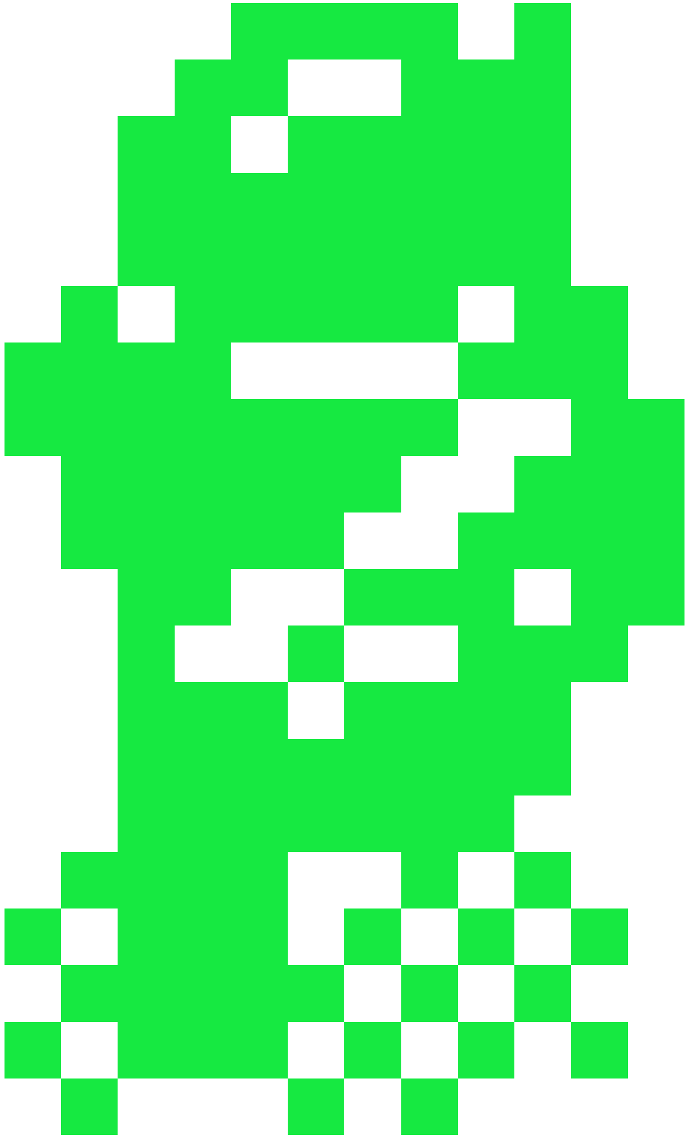
Email wcm@whitecross.org.uk

www.the-white-cross.ndirect.co.uk

ZXF 04

Spectrum computing today



exp

The Prism VTX 5000

A **css** post made recently by **Brian Gaff**, who knows a great deal about this piece of hardware since he used to maintain the **Micronet** service it connected to. The VTX tends to go for a number of notes on **ebay**; read on and become informed...

VTX5000 is a V23 manual connect modem designed for the Spectrum 16 and 48K computer. It has viewdata software, configured for the now defunct Micronet service on an 8K EPROM inside. It connects via the expansion port via a three way ribbon cable and derives all power via it. V23 is basically 1200 baud down-link from the service, and 75 baud uplink *to* the service. This is because, in the main, only very low bandwidth uplinking was envisaged.

It included a CET download routine that meant Spectrum software could be received over the 7bit system with full error checking and it ended up in the Spectrum RAM. The saving of said software was left to the person who 'built' the download file. I used to do it using a modified Multiface, or hand craft it if only basic and unprotected code was involved.

The device has a switch on the front that is manually operated for going on-line. It is only pushed down when the computer at the other end is heard, via your telephone, which is how you dial.... and then it has a timer that drops the line if nothing recognisable as date is heard after a few seconds. Very friendly!

The other switch, marked TX and RX is not used by the internal software. Neither of the above modes should be selected to use normally. RX is purely for receive of 1200 baud, so you could, for instance, use it to see what another modem sees, ie like a phone tap. The TX mode is much more useful, but can only be accessed with other software.

TX is in fact a 1200/1200 half duplex mode, which is switched with software. User to User transfers can be done this way with both modems switched like this and there were three sorts of software for this, all mainly available on other systems as well as Micronet.

U2U was the Prism one. *Dialsoft* was distributed by 'Your Computer' magazine, who also had a download service for it called *Telsoft*. *Modem* was just what it said - the X Modem protocol. Of course none of these had the 7 bit constraints of viewdata BBs or Prestel, so the transfers were generally faster.

Software for scrolling type BBs was also available and also software to generally improve the internal software were around, many written by Chris Pile and Dave Gorski amongst others.

There were modifications for auto answer so some specialised 'Micron' BBs could be run off a Spectrum using the half duplex mode and either Microdrive storage (slow to the point of narcolepsy) or a third party disk system.

I doubt if any modem out there now could connect to the VTX 5000, but it is still viable to do user to user transfers of Spectrum sized files of course, using the half duplex software, and saves transferring stuff to a PC and back if two peeps are working on a program.

It will not run on the 128K for two main reasons, First, the ROM paging jumps back to an address that just crashes the Spectrum, as the VTX pages in to copy software at power up and reset. The capacitance of the bus on the 128, coupled with the high fan out loading is just too much and the ribbon cable often just locks the machine up when connected. Some

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ZXF

Spectrum computing today

SPRING 2003/Issue 4

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If you enjoy ZXF and you want it to continue then consider yourself duty bound to let me know this (mail@cwoodcock.co.uk). All other feedback will be gratefully received also - criticisms (please be kind), improvement suggestions and notifications of any errors you think you've spotted are essential for this sort of project to succeed.

If you would like to contribute to future issues of ZXF - even if it's just to write a letter - **please do**; contact me again by the email address above.

Editor: Colin Woodcock (mail@cwoodcock.co.uk)

Website: www.zxf.cjb.net

Contributors this issue: Andrew Owen, John King, Thomas Eberle, Brian Gaff, Roelof Koning, Tommy Pereira and Nando Turco. Thanks also to Jonathan Needle, Paul Dunn, Mark Woodmass, Derek Jolly and LCD.

the way; there is an ever increasing number of demo soundtracks that you can also get hold of through WoS - and some of these are simply amazing (we'll look at the Spectrum demo scene in a future issue).

Organising your games

Now that you have access to literally thousands of Spectrum games via WoS, you might desire some way of organising them. There are a number of games database programs you can use to help you do this, the most well-known of which is probably WoS maintainer Martijn van der Heide's Spectrum Games Database (SGD) for DOS, which not only gives information on the games (author, publisher, etc; the database program itself is empty when you download it, but you can download ready made database files from WoS along with the program), but also link to the actual games files on your system, display their loading screens and allow you to launch them in an emulator of your choice. SGD is a very comprehensive program, but WoS itself is just as comprehensive - even more so in many ways (all games, for example, can be played online) and if you've a broadband connection you might well find that the web site meets all your research needs.

Tape utilities

Next issue we'll be looking at Spectrum hardware in the 21st Century - both original and new hardware - for those who feel the emulation experience just isn't quite enough. As we'll discuss then, the trade in Spectrums and peripherals on such auction sites as ebay is quite intense; plenty of people are using real Spectrums alongside or even in preference to emulators.

Of course it's easy to get hold of software for your *emulated* Spectrum. But how - other than through ebay/car boot sale/charity shop purchases - can you get hold of Spectrum software to run on your *real* machine? Actually it's very simple, because you can use those very same .TAP or .TZX files you downloaded for your emulator. All you need is a long enough 3.5mm mono jack cable to connect your Spectrum's ear socket to your PC's speaker out socket (I use the length of 'netwoking' cable that came with my Interface 1) and a DOS utility called Taper (also, incidentally, by Martijn van der Heide). For the purpose of loading programs onto a Spectrum, Taper acts as a sort of virtual cassette recorder for all those files, producing crisp, clear tones that the Spectrum at the other end of the line just gobbles up. Taper works every time for me, although of course Windows XP users will not be able to use this program without a suitable DOS emulator.

This isn't the only thing that Taper does, by the way. You can also reverse the direction and play Spectrum tapes you own into taper to create a tape file for your emulator (you might like to do this if you own any of the titles whose distribution is denied, for example, or if you have any programs you wrote yourself which you would like to share or preserve). this particular feature of Taper is less well supported across the range of PC audio hardware; my own personal setup, for example, has its own integrated soundcard in the motherboard and Taper simply refuses to acknowledge it.

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choice to learn new things, but we have to desire to learn them. Communications technology more generally offers us the opportunity to talk to more people, but we have to want to know them. If ever a change comes about that's been really worth the wait it will be in our thinking... as people... about people.

I could go on, but you've a Spectrum magazine to be reading and I'm running out of space. As the editor of ZXF I hope very much that you enjoy this issue as much as you have indicated you enjoyed reading the previous three. As a psychologist I urge you to check out Steve Hein's site and his current, moving words about the conflict. Think some new thoughts; the world might seem more grey and complex and confusing, but if that's the way it actually is, why fool yourself into believing it's black and white?

Until August,

Colin Woodcock

mail@cwoodcock.co.uk

exp

Back to the Spectrum

Part Three. A look at some of the freeware PC utilities you can use to enhance your Spectrum experience.

Since we concluded last issue's section looking at graphics manipulation this seems a good place to start in our exploration of utilities. Last time we looked at the SCR file format as a means of storing Spectrum screens on your PC and there are plenty of utilities to help you work with these without having to go near an a emulator. Of course Windows doesn't recognise SCR files as a valid graphics format (it wasn't written with Spectrum emulation in mind; it will probably try to tell you this a screen saver) so don't expect Windows Explorer to displays these as pretty little thumbnails. The very first thing you'll need therefore if you have more than a couple of SCRs in a folder is a viewer program. These won't allow you to manipulate your graphics much, but they will let you look at them. A good example of such a program is ZX Screens by Pavel Pliva, a very simple screen viewer which will display a whole directory of SCR files one after another using the Slide Show option.

In so far as actual manipulation is concerned, there are many titles to choose from. One of my personal favourites is SevenuP. This programme by Jamie Tejedor Gomez (aka Metalbrain) is a touch on the slow side - even on fast machines - but what it lacks in speed it more than makes up for in features and usability, such as straightforward buttons for changing INK and PAPER colours (and turning on/off FLASH and BRIGHT) and a very useful zoom facility (which adds in a pixel and character grid on high zoom levels - invaluable for pixel-perfect placement and avoiding colour clash).

BMP2SCR (by LCD) also has a built-in graphics editor, but this particular utility's strength lies in its ability to convert bitmap images into SCR files, allowing you effectively to take any image and turn it into a Spectrum screen (see issued two for a worked example of this, using BMP2SCR and SevenuP). There are in fact a number of programs that do this (including the aforementioned ZX Screens), but BMP2SCR employs a number of different techniques to explore, each giving different results. One such approach is the black and white dithering of a colour bitmap, which has been explored still further in Derek Jolly's YASPIC (Yet another Spectrum Image Convertor), which allows you to choose between a random dithering technique or Floyd/Steinberg dithering; once your black and white image has been generated you can then colour it (with complete control over INK, PAPER and BRIGHT) and save it out either as an SCR graphics file or TAP virtual cassette file.

Back momentarily to SevenuP: for more advanced users, this program also allows you to design and edit animated sprites (little animated graphics in games - your hero, for example, as he jumps from platform to platform, or the nasty beasties that try to shoot him). The most obvious use of this will be to insert into a machine code game; you could, however, use it to change the sprites in an existing game if you so desire. This particular activity is a process not without its complications, but not quite so arduous as you might think and doesn't necessarily require any knowledge of machine code. Using the excellent Spectrum Graphics Editor (SGE), for

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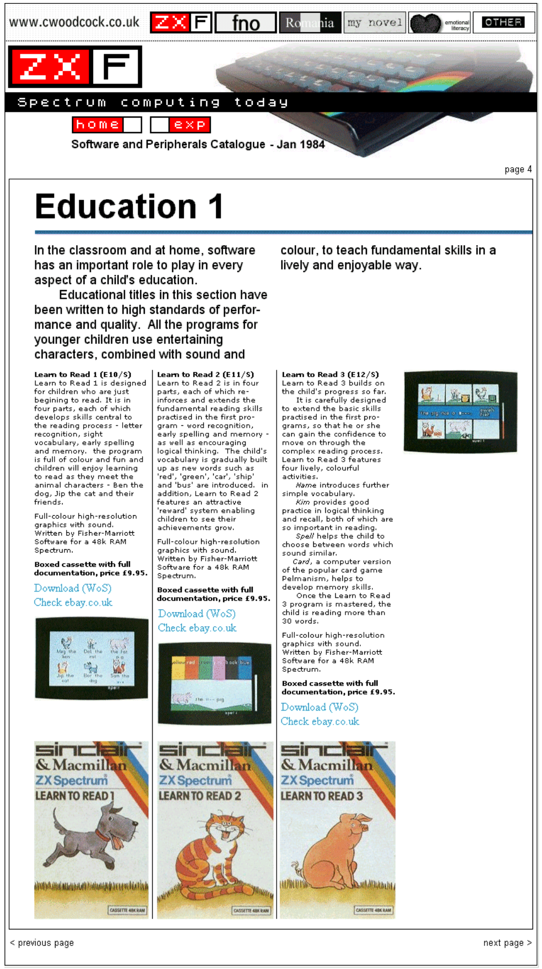
RAWW.ORG • SINTECH • VBSPEC 1.70 • BASIN • BMP2SCR PRO • SPIN 0.5 • IDSA • MORE...

And on the subject of websites, ZXF itself has had an HTML makeover - but you probably already know that, seeing as how you had to go there to get hold of these very pages...

The new ZXF site is a fairly major upgrade on the couple of pages that hosted our humble little magazine previously. As before, it is a part of **www.cwoodcock.co.uk** (host also to my other main site *Free Novels Online*, my own novel and various other bits and pieces), so if the pop-under ads and Gathor installers that are an unfortunate consequence of the *cjb.net* address (ie, **www.zxf.cjb.net**) become too much to bear you can always bookmark www.cwoodcock.co.uk (which is paid for) and make your way to ZXF from there.

In addition to HTML versions of previous articles and interviews, the site also offers some new on-line resources, my particular favourite (even if I do say so myself) being an HTML version of the January 1984 *ZX Spectrum Software and Peripherals Catalogue* (page 4 is pictured right). Each page of the catalogue has been lovingly (and I do mean *lovingly*) recreated in HTML, with **WoS** download and customised **ebay.co.uk** search links added in for each title. My hope is to add in inlay scans and instructions over time too.



Software and Peripherals Catalogue - Jan 1984

page 4

Education 1

In the classroom and at home, software has an important role to play in every aspect of a child's education.

Educational titles in this section have been written to high standards of performance and quality. All the programs for younger children use entertaining characters, combined with sound and colour, to teach fundamental skills in a lively and enjoyable way.

Learn to Read 1 (E10/S)
Learn to Read 1 is designed for children who are just begining to read. It is in four parts, each of which develops skills central to the reading process - letter recognition, sight vocabulary, early spelling and memory. the program is full of colour and fun and children will enjoy learning to read as they meet the animal characters - Ben the dog, Jip the cat and their friends.

Full-colour high-resolution graphics with sound. Written by Fisher-Marriott Software for a 48k RAM Spectrum.

Boxed cassette with full documentation, price £9.95.

Download (WoS)
Check ebay.co.uk

Learn to Read 2 (E11/S)
Learn to Read 2 is in four parts, each of which reinforces and extends the fundamental reading skills practised in the first program - word recognition, early spelling and memory - as well as encouraging logical thinking. The child's vocabulary is gradually built up as new words such as 'red', 'green', 'car', 'ship' and 'bus' are introduced. in addition, Learn to Read 2 features an attractive 'reward' system enabling children to see their achievements grow.

Full-colour high-resolution graphics with sound. Written by Fisher-Marriott Software for a 48k RAM Spectrum.

Boxed cassette with full documentation, price £9.95.

Download (WoS)
Check ebay.co.uk

Learn to Read 3 (E12/S)
Learn to Read 3 builds on the child's progress so far.

It is carefully designed to extend the basic skills practised in the first programs, so that he or she can gain the confidence to move on through the complex reading process. Learn to Read 3 features four lively, colourful activities.

Name introduces further simple vocabulary.

Kim provides good practice in logical thinking and recall, both of which are so important in reading.

Spell helps the child to choose between words which sound similar.

Card, a computer version of the popular card game Pelmanism, helps to develop memory skills.

Once the Learn to Read 3 program is mastered, the child is reading more than 30 words.

Full-colour high-resolution graphics with sound. Written by Fisher-Marriott Software for a 48k RAM Spectrum.

Boxed cassette with full documentation, price £9.95.

Download (WoS)
Check ebay.co.uk

sinclair & Macmillan ZX Spectrum LEARN TO READ 1
sinclair & Macmillan ZX Spectrum LEARN TO READ 2
sinclair & Macmillan ZX Spectrum LEARN TO READ 3

< previous page
next page >

int

* Enhanced some of the commands and functions:

CLS - Now takes parameters. Works as normal without a parameter (defaults to CLS 0) but sets border and attributes with a value from 1 to 255. Produces 'Out of range' error with higher values.

CONT - Replaces CONTINUE. Works as normal.

COPY - Now a file command. Takes any syntax. Produces 'Bad device' error unless additional hardware connected.

DEL - Replaces ERASE. Now takes any syntax. Produces 'Bad device' error unless additional hardware connected.

DIR - Replaces CAT. Now takes any syntax. Produces 'Bad device' error unless additional hardware connected.

FORMAT - Now takes any syntax. Produces 'Bad device' error unless additional hardware connected.

GOTO - Replaces GO TO. Works as normal.

GOSUB - Replaces GO SUB. Works as normal.

LIST - LIST only lists the line you name rather than the whole program starting at that line. The full syntax of LIST is:

```
LIST [x][,[y]]
```

where x is the starting line number (default 0) and y is the ending line number (default 16383). Produces 'Out of range' error with line numbers greater than 16383.

LLIST - Equivalent of the new LIST command only sent to stream #3.

MOVE - Now takes any syntax. Produces 'Bad device' error unless additional hardware connected.

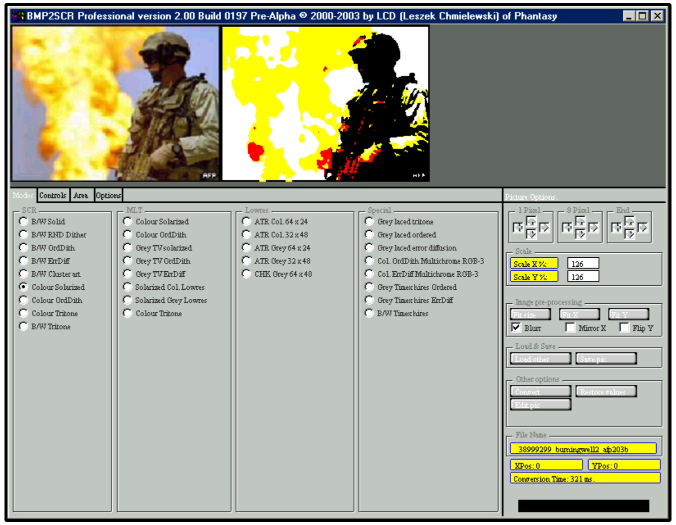
NEW - Now takes parameters. Works as normal without a parameter (defaults to NEW 0). NEW 1 is the equivalent of PRINT USR 0. NEW n is the equivalent of CLEAR n: NEW. Produces 'Bad RAMTOP' error with values outside the range of CLEAR.

SCREEN$ Can now detect UDGs as well as normal ASCII characters. It cannot detect predefined graphics as there is no bitmap to compare them against.

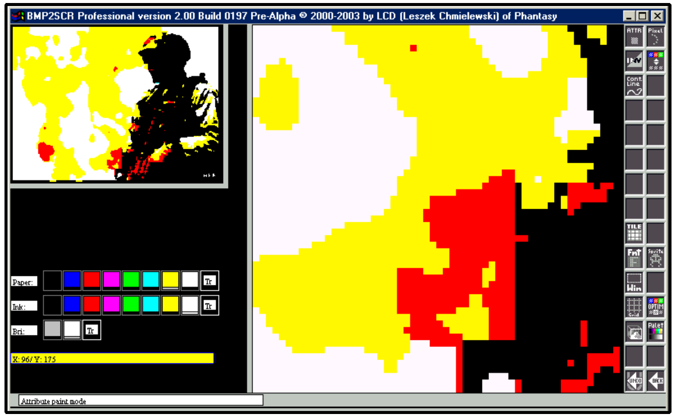
Readers of the loading screen tutorial in issue 2 will know that I am also something of a fan of **LCD**'s **BMP2SCR**. LCD has been talking in recent months about a new version of this program, **BMP2SCR Pro**. And now it's ready.

A couple of weeks ago, Kindly LCD sent ZXF a pre-release copy of the program to look at. Where do I begin? Whilst the user interface might send the meek running for cover, this is an *extremely* comprehensive program that covers just about every aspect of Spectrum graphics that I for one can think of. Conversion from PC graphics is, of course, at the very top of the list, and now there's an even bigger selection of methods to take you to a great-looking SCR, which you can then modify as appropriate using the improved built in editor. And there's much, much more besides this.

BMP2SCR Pro requires Microsoft DirectX 8.1 or above. Get it at: **http://members.chello.at/ursula.chmielewski/bmp2scr.htm**


BMP2SCR Professional version 2.00 Build 0197 Pre-Alpha © 2000-2003 by LCD (Leszek Chmielewski) of Phantasy

● Colour Solarized
Scale X %: 126
Scale Y %: 126
☑ Blurr
File Name: 38999299_burningwell2_afp203b
XPos: 0
YPos: 0
Conversion Time: 321 ms.


BMP2SCR Professional version 2.00 Build 0197 Pre-Alpha © 2000-2003 by LCD (Leszek Chmielewski) of Phantasy

X: 96 / Y: 175
Attribute paint mode

Then I got the idea for a new super spectrum, which distracted me for a while (but it's finished now). Then I stopped the project for 12 months while I went to Australia. I picked it up again when I got back but I was still working on it as a series of patches. I stopped the project again for six months while I went off sailing. But I'm back at it now. Having found Geoff Wearmouth's Incomplete Spectrum ROM Assembly and modifying it to compile on ZASM under MacOS 9, I'm now able to provide complete source code for SE Basic, which in turn has made it possible to make the project Open Source.

4a) Clearly SE BASIC has evolved from your various ROM projects; is there an official 'birth date' for it, however?

I see SE Basic as the culmination of all the tinkering I've done with the ROM which started back in 1996, so I reckon that's its birth year. I couldn't pin it down to a specific date, but I was fairly busy finishing my degree in the first part of the year so I guess late June would probably be a fair guess. If you nip over to one of the sites which has most of the different ROMs ever made available for the Speccy you'll see a whole host by me, Spanish Pentagon, German 48, +4, Plus 2c, Psion 5, and possibly others I can't even remember. In creating each of these ROMs I learned something about the original program that helped me to develop SE Basic. In fact a lot of code in SE Basic comes directly from the +4 ROM, so that's why the copyright date on the documentation says 1996.

4b) Who has helped you out along the way?

There are really far too many to list, although not enough people contributing actual code. The main people I have to thank are Steven Vickers for writing such a great version of BASIC in the first place and the accompanying manual, Cliff Lawson at Amstrad for giving me permission to do the project, John Grant at Nine Tiles for answering my questions, the original programmers of the UK 128 editor; Martin Brennan, Steve Berry, Andrew Cummins, Rupert Goodwins and Kevin Males (you can see their initials at the end of the ROM), for answering my questions (as an aside I think some of them got in touch with each other after not having seen each other since leaving Sinclair as a result of my enquiries), Drs Ian Logan and Frank O'Hara for the Complete Spectrum ROM Disassembly, Geoff Wearmouth for creating the Incomplete Spectrum ROM Assembly file, which SE Basic is built on, and for vast amounts of bug fixes and general advice, Günter Woigk for being the only emulator author to properly support the Spectrum on the Macintosh - SE Basic was developed almost entirely on the Mac using different emulators by Günter and his excellent cross-assembler, Chris Young for being lead Beta tester since forever and coming up with great ideas, Chris Cowley for building Timex support into vbSpec at my behest, just so I could test some of the functions of SE Basic, Slavko Labsky, Ian Collier and all the other authors of other custom ROMs for giving me ideas (and sometimes donating code), and of course all the people who are already using SE Basic. Apparently it's more popular than I'd realised even in its early flawed version 0.70T which was the last public release.

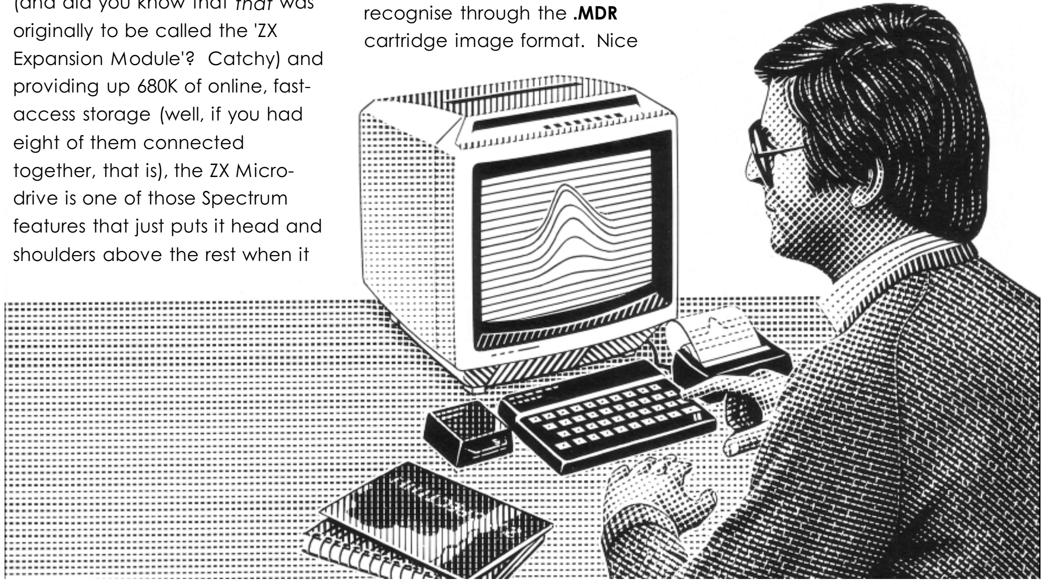
.MDR preservation

Is it me or does *ZX Spectrum Man* below bear an uncanny resemblance to a certain Mr gates? Anyway, as Spectrum Man will tell you, "no other home computer can match the performance of a complete, powerful Spectrum system." And by complete, we mean of course complete with *Microdrives*: we'll have none of that disc drive nonsense around here thankyouverymuch. Connecting via the ZX Interface 1 (and did you know that *that* was originally to be called the 'ZX Expansion Module'? Catchy) and providing up 680K of online, fast-access storage (well, if you had eight of them connected together, that is), the ZX Microdrive is one of those Spectrum features that just puts it head and shoulders above the rest when it comes to retrospective. It just positively oozes those Sinclair hallmarks of 'cheap,' 'unreliable' and 'downright beautiful'.

And now that **Spectaculator 4** supports it (see *emulator news*), a call has been made to start cataloging all the software designed for it, in particular software actually released and sold on microdrive cartridges, which emulators such as Spectaculator and **RealSpectrum** recognise through the **.MDR** cartridge image format. Nice man Geoff Wearmouth has already started converting cartridges, with the original introductory cartridge currently available at **www.wearmouth.demon.co.uk/srlintro.zip**

Now what *I* want to see is an IF1 supporting emulator that you can actually connect to a real Spectrum + IF1 via the *ZX Net*.

Anybody?



int

You can then access SE Basic with an OUT command.

c) Put a patched version of the 128 editor in ROM 0 and SE Basic in ROM 1. Two suitable editors, based on the Spanish 128 Editor, and the UK 128 Editor, will be supplied in the package.

SE Basic will support printers connected to the 128's RS232 port.

3) If you have a +2A and you don't plan on upgrading it to a +3e (no reason to now really since ZXATASP is out), you have the same options as a normal 128. This leaves you with two free ROM slots to do what you like with. For compatiblity's sake I'd recommend putting a modified Editor in ROM 0, SE Basic in ROM 1, a 128 editor patched to work with the original Spectrum BASIC in ROM 2, and the original Spectrum BASIC in ROM 3. This covers all the bases. I should also point out that as well as RS232, SE Basic will support parallel printers on a +2A/+3.

4) If you have a +3 and you don't mind losing +3DOS support you can follow the instructions for the +2A. If you want to keep +3DOS support you can replace ROM 3 with SE Basic after replacing ROM 0 with a modified editor. A suitable ROM set based on the +3e will be included in the package.

When you refer to a 'modified Editor' for ROM 0 you are refering to the 128k editor, of course - what are the modifications? Is it just a matter of accessing SE BASIC from the main 128 menu where '48 BASIC' used to be, or are the differences more deep than that (ie, is SE BASIC itself at the core of 128 BASIC)?

I hadn't realized it until you asked the question, but of course to the average user it appears that the 128 has two different versions of BASIC. In fact there is only one version of BASIC; the one in ROM 1 (that SE Basic replaces). ROM 0 is referred to as the 'Editor' because that's all it is; a new environment for editing normal Spectrum BASIC programs. With a few exceptions, all of the commands and functions in 128 Basic are called directly from ROM 1. As such you don't need to change the menu, since this just invokes ROM 1. But you do need to change the editor because it expects certain locations in ROM 1 to hold certain bytes, and in SE Basic these bytes are different.

I'm no hardware guru, but as I understand it at least, the four +2A/+3 ROMs are held on just two chips (I'm not sure about how many chips are used to store the two 128+/+2 ROMs - I seem to think it's one, but I could be wrong there): would the trick here be to concatenate ROMs 0 and 1, and ROMs 2 and 3 before blowing them onto the physical chips?

It's one 32K ROM on the 128/+2 and two 32K ROMs on the +3/+2A. Yes you just concatenate the binaries in number order (1 follows 0) before blowing the EPROM.

So what, then, about other z80 based machines - Let's say the Sam Coupe, a z80B machine if I recall correctly - could SE BASIC run on this or be modifed to run on it?

Well, in the case of the Sam Coupe, all you need to use SE Basic is a Spectrum emulator and then you just substitute the ROM. However, one of the long term aims of the project is to create executables for other Z80 platforms that would enable at least a small number of Spectrum machine code based programs to run on those platforms. For instance, the Amstrad CPC can currently emulate Spectrum BASIC, but there is no support for machine code. This would only work on programs that address the hardware

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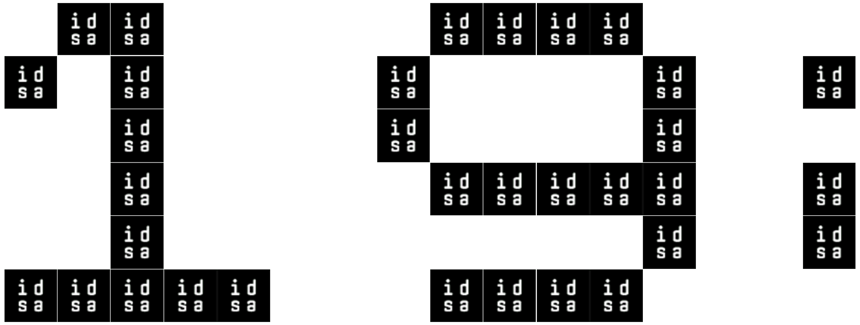


protected by copyright, including, but not limited to:

007

Barbarian

Donkey Kong

Frogger

Mario

Pac Man

Soldier Of Fortune

Through the Berne Convention and other international treaties covering intellectual property rights, we believe that our members' rights in such games are entitled to the full protection of the intellectual property laws of your country.

The unauthorized copies of such game product[s] appearing on, or made available through, such site are listed and/or identified on such Internet site by their titles, variations thereof or depictions of associated artwork (any such game titles, copies, listings and/or other depictions of, or references to, any contents of such game product, are hereinafter referred to as "Infringing Material"). Based on the information at its disposal on 2/7/2003 6:49:39 PM GMT, IDSA believes that the statements herein accurately describe the infringing nature and status of the Infringing Material.

Accordingly, IDSA hereby requests xxxxxxxxxx to immediately remove or disable access to the Infringing Material at the URL address identified above.

Should you have questions, please contact the IDSA at the above listed mailing address or by replying to this email. Please also include the above noted Reference Number in the subject line of all email correspondence.

We thank you for your cooperation in this matter. Your prompt response is appreciated.

Regards,

Robert L. Hunter, IV

Interactive Digital Software Association

From: Martijn van der Heide <mheide@worldofspectrum.org>

To: dmca@idsa.com.no.junk.mail

Subject: Your reference #922932

Date: Mon, 17 Feb 2003 12:54:02 +0100 (CET)

Dear Mr Hunter,

Thank you for your email dated 14th February 2003, 5:23PM CET. The World of Spectrum archive site at <http://www.worldofspectrum.org/> is a software preservation site, archiving software for the classic microcomputer, the Sinclair ZX Spectrum.

We strive to gain permission for redistribution for all software in the archive from the original publisher, and if the publisher no longer exists, from the original author. We publish all such permits on our site, and where such permission has been rescinded by either the publisher and/or author, we comply and remove the affected titles from the archive. Our copyrights policy is available in a dedicated section of the site, the Copyrights section, at www.worldofspectrum.org/permits/.

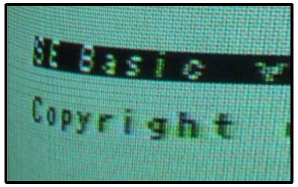
To this end, we take all allegations that we are carrying software to which we do not have permission very seriously, however, the list of titles provided to us by yourselves is unfortunately somewhat vague, and we believe there may in fact be 'false positives', with titles in our archive of old software originally made during a period between 1982 to 1992 matching currently available software. An example is the title 'Soldiers of Fortune', for which we have explicit formal permission from the publisher Firebird Software Ltd (a label from British Telecom).

If there is indeed clear and present proof that the titles you specifically list are present in our archive, we will be happy to remove those titles to endeavour to retain the goodwill we have in the industry and our position as being responsive to creators requests. To this end, could you please provide further information on the titles you have listed, such as publisher (or relevant IDSA member), release date, platform and so on, so that we can properly investigate and expedite this request.

Thank you for bringing this to our attention.

Yours sincerely,

Martijn van der Heide



my PC's speaker socket to the Spectrum ear socket using a standard 3.5mm mono cable - actually an Interface 1 ZX Net cable; a normal Spectrum ear/mic cable would probably do fine, but will be a little short). This version will also work with the original 128/+2; there are also versions for the +2A and the +3, both of which run SE BASIC in RAM mapped into the area normally used by the ROM.

SE BASIC is intended for use in a variety of machines beyond just the Spectrum. To demonstrate this, a version for the SAM Coupé is also available in SAM disk image format. this can be loaded into the excellent SIM Coupé emulator or converted into a real disk for a real SAM.

All in all, a considerable development from a few months ago, when SE BASIC could only be obtained as a 16K ROM IPS patch. And there's more. At World of Spectrum forums - **www.worldofspectrum.org/forums** - a new discussion board has been opened for all SE BASIC related discussions. Although Andrew himself will be unable to contribute over the coming months there's already a lot of information there and, as SE BASIC expertise develops within the Spectrum community, others should be able to help you out with your queries.

What remains to be done? Yet to emerge is the SE BASIC manual, which will eventually be released in PDF format. well, we'll just have to wait for that. Andrew has, however, posted information on the key features of version 0.83c on his website and a copy of that text follows the interview.

For now, though, I've gone on enough.

SE BASIC - as I understand it - is a replacement ROM for Z80 based machines.

Yes. The ultimate aim is that it will run on a range of Z80 based hardware.

Let's look at the ZX Spectrum first as the most obvious example of one of these machines. What advantages does SE BASIC offer over standard Sinclair BASIC? Let's assume for the moment we're using the ROM with a Spectrum emulator.

Where to begin? OK...

First this is the most compatible version of BASIC for running commercial Spectrum software. It will run almost every 16K, 48K, and 128K program out of the box. For example, unless you own a +3 (or a +3 emulator, but remember not every system has these yet), this is the only version of BASIC that will let you hear the AY sound on Lemmings. Also, it doesn't suffer from the compatibility problems of 128 Basic when running legacy 48K software on a 128.

Second, if you're writing BASIC programs you'll find the editor much easier to use than either the original Spectrum editor or the 128 Basic editor. For a start there are no more tokens to remember. Every command is

---

FLASH DISK for ZX SPECTRUM 48K

Here below is shown how I connected a Compact Flash Card to the Spectrum, using the so called Memory Mapped Configuration. Due to the design of the CF-Card no further interfacing is needed. This diagram results in the following I.O. ports:

Offset	A7	A15	A14	A8	Port	/RD=0	/WR=0
0	0	0	0	0	127	Even RD Data	Even WR Data
1	0	0	0	1	383	Odd RD Data	Odd WR Data
2	0	0	1	0	16511	Sector Count	Sector Count
3	0	0	1	1	16767	Sector No.	Sector No.
4	0	1	0	0	32895	Cylinder Low	Cylinder Low
5	0	1	0	1	33151	Cylinder High	Cylinder High
6	0	1	1	0	49279	Head	Head
7	0	1	1	1	49535	Status	Command

Notes:

Sector size = 512. Because of the possibilities for 16-bit operations the data bytes can be regarded as odd and even bytes. After register (0) is accessed to read the even byte, the odd byte is copied there. So every 'odd' read this byte can be taken from register (0) as well as from register (1).

The registers (3),(4),(5),(6) can also hold LBA (Logic Block Acces) numbers, so a lot of calcuating can be left out!

A few important Commands:

#EC = Identify drive (512 bytes of manufacturers info can be read from the sectorbuffer)

#20 = Read sector

#30 = Write sector

The meaning of bits in the Status Register:

ERR bit 0 = set when an error occurred
0 1 = always 0
CORR 2 = set when the data needed correction
DRQ 3 = set when (more) data must be read or written
DSC 4 = set when the Card is ready
DWF 5 = set when a write fault occurred
RDY 6 = set when Card is ready to accept a command
BUSY 7 = set when the Card is busy

So under default conditions we should read decimal value 80 from this register.

A demonstration of the general way for approaching the Flash Disk is given in this real simple "Identify" Program in BASIC:

```
5   CLEAR 39999: LET T=40000

10  IF IN 49535 <>80 THEN STOP : Flash Disk not ready!!

20  OUT 49535, 236 : give identify command #EC

30  POKE T+1, IN 127: POKE T, IN 127 :read and poke MSB
(first) and LSB

40  IF IN 49535 <>80 THEN LET T=T+2: GOTO 30
:Loop until 512 bytes read
```

And now check what we've got, (a.o. the manufacturers name):

```
50 FOR f=40000 TO 40512

60 PRINT f ;"  ";PEEK f , CHR$ PEEK f AND PEEK f >31

70 NEXT f
```

Please note that in line 40 I left out the discrimination of error-bits, I just check for the ready condition. In 'normal life' some error checking should be done.

I hope this is enough to wet your appetite in the subject. More spec's can be found on internet. For real use as a hard disk some kind of DOS is needed of course, and room to store such DOS. Blessed are those who have a spare ROM or RAM bank lying around, like me....

Roelof.Koning@12move.nl

SE BASIC

Following last issue's interview with Andrew Owen about the **ZX Spectrum SE**, we turn now to his software masterpiece. Andrew is now off on his travels again and will not be developing **SE BASIC** any further for the immediate future. He achieved a remarkable amount whilst he was back however, worthy of at least a little preamble before the interview itself...

Some of this repeats information given in the news section last issue (03), however it's worth going over again here for the sake of completeness. The latest versions of SE BASIC available from the official website at **www.worldofspectrum .org/sinclairbasic/** are version 0.83c (16K ROM Developer Release) and version 0.80a (16K ROM Public Beta), both for 16K and 48K machines. SE BASIC is a 16K ROM and can be used straightaway as an alternative to the standard 48K Spectrum ROM in emulators such as **SPIN** or **Spectaculator** which allow you to substitute in alternative ROM files (you could also blow the ROM onto a 16K EPROM if you have the wherewithal and drop this into a real Spectrum in place of its existing ROM). To access either of these versions in anything other than 48k mode, however, you'll need to do a bit of work.

The first 128k Spectrum and the +2 used two 16K ROMs on a single 32K ROM chip. One of these - ROM 1 - is the original 48K Spectrum ROM (just so we're clear here, I mean the ROM of the 48K Spectrum, not a Spectrum ROM that is 48K - all spectrum ROMs are 16K). The other - ROM 0 - adds in all the extra functionality of 128 mode such as the editor and menu system. As Andrew points out in the interview, ROM 0 is not a separate BASIC, but an extension of ROM 1.

The +3 and +2A actually use *four* ROMs on two 32K ROM chips. These are:

ROM 0: 128k editor, menu system and self-test program

ROM 1: 128k syntax checker

ROM 2: +3DOS

ROM 3: 48 BASIC

So in this case ROM 0 on the +3/+2A is the same as ROM 0 on the 128/+2 and ROM 3 on the +3/+2A is the same as ROM 1 on the 128/+2. Clear?

So to use the latest version of SE BASIC with the complete range of Spectrums it needs to be substituted in for one of these ROMs - the obvious choice is ROM 1 for the 128/+2 or ROM 3 for the +3/+2A, however Andrew discusses other combinations in the interview. Since most emulators just use a single ROM file containing all ROMs together (ie, a 32K ROM file for the 128/+2; a 64K ROM file for the +3/+2A) you therefore need to obtain all the individual ROM files separately (which you can do from *The Spectrum ROMs collection* at **www.srcf.ucam.org/~pak21/spectrum/roms.html**) and then concatenate them with SE BASIC as appropriate.

If all this sounds simply too horrendous to bear then fear not. A great deal of Andrew's work over the last few months has been in making SE BASIC more accessible. First of all there are a number of **IPS Patches** which can be downloaded and applied to these 32K and 64K ROM files (ie, the ones supplied with and used by your emulator) to turn them into SE BASIC ROM files. From the 'Patches' page at the SE BASIC website you can get hold of patches which will install SE BASIC (version 0.8) as ROM 1 on a 128/+2 or as ROM 3 on a +3/+2A. There are also smaller patches to download from this page for the editor ROMs (ROM 0 for the 128/+2; ROMs 0 - editor - and 1 - syntax

---

Emulator news

unsuccessfully to preserve ever since I got into this emulation lark (it was the piano accompaniment to a piece of violin music I was supposed to be learning, programmed using the PLAY command; I tried to convince my parents at the time that, since the program would ultimately be used to support my violin practice, programming it should actually come out of violin practice time: I failed) loaded perfectly on the very first try. This is going to come in very handy indeed.

But perhaps the biggest addition, taking Spectaculaor into areas explored previously only by emulators such as RealSpectrum and **Z80**, is support for the ZX Interface 1 and microdrives. And, as with all things Spectaculator, the implementation is smooth and flawless, and backed up by the usual extremely comprehensive help system. Up to eight microdrives can be used together (as for the actual Interface 1), and creating a new cartridge is extremely easy, via the File>New option.

All in all, therefore, a very substantial update indeed. But it doesn't finish there. Jonathan has given ZXF an exclusive sneak preview of the soon to be released version 5 of Spectaculator. This adds in - you guessed it - Spectrum +3 support, finally completing the official Spectrum range. Rather than just supporting the built in +3 drive A, support has also been added for a drive B, which can be either an additional 3" Amstrad CF2 drive or a 3.5" DSDD floppy drive with a capacity of up to 720Kb.

Interface 1 support is developed further in Spectaculator 5, with the built-in RS232 port emulated, thereby allowing you to connect you real Spectrum to your PC and share files (not quite ZX Net, but a step in the right direction).

And there's been a big improvement to the quality of emulated loading tones,, now allowing Spectaculator to act as a virtual cassette recorder for a real Spectrum via your sound card's speaker out socket. I tried it, it works without a flaw (Taper suddenly looks rather old), and I'm telling you, loading a games simultaneously on both a real and an emulated Spectrum is seriously, seriously cool.

It's all obtainable from the usual address: **www.spectaculator.com** Spectaculator is freeware, but if you're able to help Jonathan out a little you can now make an online donation via **Paypal**.

SPIN

No new version of SPIN has been released yet, but ZXF can reveal a few details of the upcoming version 0.5, courtesy of information provided by **Paul Dunn** and **Mark Woodmas**.

SPIN has been given a bit of an overhaul for version 0.5. A lot of the code has been rewritten, with a faster-running emulator emerging as a result. The options window has been redesigned, adding in a colour settings panel and some rather groovy new icons. There will be improvements made to the SPIN debugger also. Most significantly - as with Spectaculator - SPIN 0.5 will support the ZX Interface 1 and Microdrives.

Also due soon from the SPIN stable is a new program altogether - a Spectrum BASIC interpreter based on the SPIN core. I'm guessing it's essentially a new way to mess around with Spectrum BASIC without the hassle of having to remember all those keywords and the tedious mystery to the locations of the various symbols and punctuation marks. A very early version of the interpreter, called SPINLite, was realeased in 2002's dying breath (that'll be December 31st then) and since then the project has been renamed BASin, and we're all waiting to see what emerges. Keep watching; a recent post on **css** hints that we might not have to wait much longer...

Yes, it's really called *BASin*.

Load

Dead or Alive

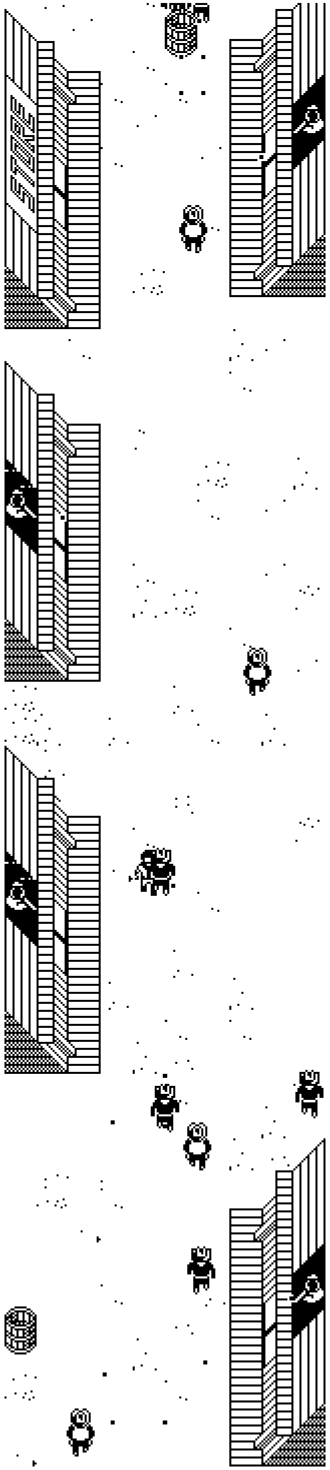
Format: ZX Spectrum
Publisher: Cronosoft
Author: Jonathan Cauldwell
Price: £2.99
Goto: www.cronosoft.co.uk

Dead or Alive is the second Cronosoft release by Jonathan Cauldwell and quite a different game than **Egghead in Space**. A vertical scrolling shoot 'em up, this title sees you as the new sheriff, out to clean up the streets of your new patch in the wild west.

And wild is the appropriate world, for it would appear that your appointment has not gone down well with the residents, who turn out in their droves to shoot you down like the dog the clearly believe you to be. A veritable army of rough shaven, tobacco spitting, gun slinging bandits come at you; it probably crosses our hero's mind before he's even reached his first barrel (which, if shot a few times, might surrender extra fire power or speed to aid you on your way) that a job in a library somewhere doesn't seem so unattractive after all. He is not welcome. Happily, however, the laws of physics have decided to look kindly on you and make the bad guys' bullets travel more slowly than your own. It would be a bigger advantage if there weren't so many of them. It's obviously a popular town, but I can't for the life of me think why.

A word of advice: if you load this game into an emulator, play it in full screen mode and you'll get the hang of the controls that bit quicker. In fact, after a few frustrating cases of death-by-wandering-into-a-bullet-you'd-already-dodged-then-quite-forgotten-about, you'll find yourself laughing as you take your stroll up the street, the body count piling up as you go, weaving casually around those lethargic bullets and picking off baddies the moment they show their faces. That is, until you meet the super bad guy at the end of the level, who has had a word in the ear of physics and managed to wangle himself a gun with the same firing speed as yours. This is where it gets quite hairy.

Dead or Alive, as you'll no doubt surmise for yourself , is **Commando** done cowboy style. So if you liked that coin-op conversion you will probably lap this one up like a thirsty horse tied next to a water trough. Or something.



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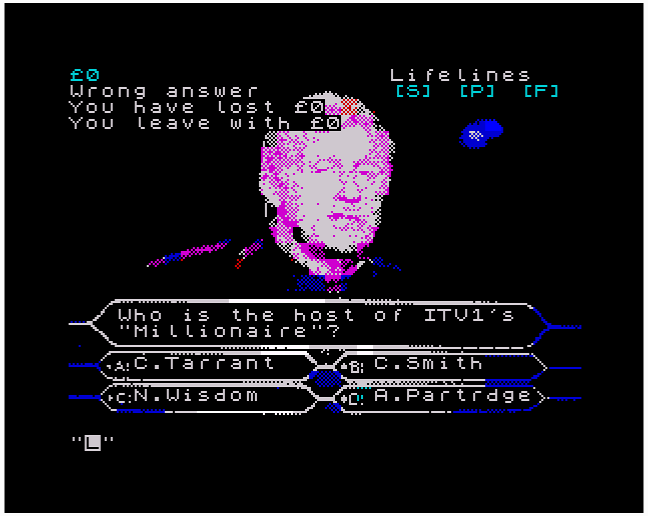
brilliantly uses the ploy that this could, conceivably be something playable. Oh, how it is not.

Runners up this year were **Earth Girls Make Tasty Snacks** by Juan Bolokov in second position ("It's cute, it's funny, and it captures perfectly the unwelcome feel of Cascade Cassette 50") and **Sir Clive's Dragon Mission** by Anders Carlsson ("This has all of the elusive pathos of a game that doesn't want to be crap but can't help it") coming third.

But fear not, crap addicts, for the 2003 competition is already underway! This year's host is the shady **Dave the Lurker** and the competition itself can be found at **http://8bitorbust.info/cgc/**. This will be the eighth celebration of the thoroughly dreadful standard of games programming established by the **Cascade Cassette 50** compilation (see left), which itself celebrates its 20th anniversary this year.

Entries have already started lining up, the first being **Crap Galge Game** by **Rasmus Palbo**. There's also **Nun Catcher** by **Nick Fleming**, a rather promising game until you realise you actually want to play it again. Every year the same problem...



```
£0
Wrong answer
You have lost £0
You leave with £0
```

```
Who is the host of ITV1's
"Millionaire"?
A: C.Tarrant        B: C.Smith
C: N.Wisdom         D: A.Partrdge
```

Title: Millionaire

Author: Chris Young

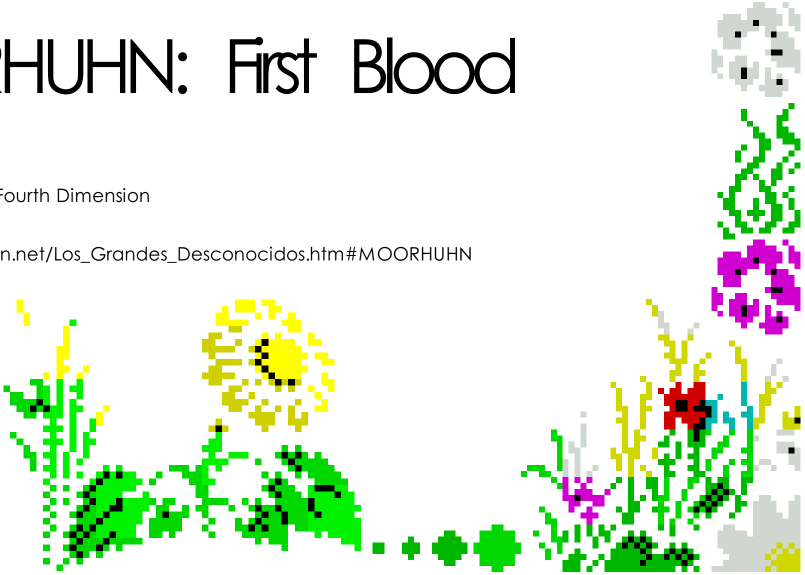
Description: Spectrum Conversion of popular TV quiz show

Comments: Crap, but clever crap. Completely unnecessary colour clash sets the scene, alongside graphics that resemble a 'thousand times photocopied' office joke of the 'you don't have to be mad to work here, but it helps' variety. Opening tune could have been written through throwing a dice a few times. Expect your knowledge to offer no advantage whatsoever. You have to work to make something this bad.

Millionaire retains enough of a semblance of a commercial game, however, to make it just about believable. This title resembles those 'defeat snatched from the jaws of victory' titles (usually by US Gold). If WWTBAM really was sold in Spectrum format, it might well have looked a lot like this...

MOORHUHN: First Blood

Format: ZX Spectrum
Author: Triebkraft and Fourth Dimension
Price: Free
Goto: http://www.jaivan.net/Los_Grandes_Desconocidos.htm#MOORHUHN



This game was made by Triebkraft and Fourth Dimension based on the original game by Phenomedia. What that original game is or what machine is on I have no clue :-O

There are three different levels of play to this basic shooter game. In one you simply have to shoot a certain number of birds under a certain time and when you're done the game is over making it seem more like a practise level. The next level you have to shoot as many birds as possible under a time limit and your ammo is unlimited although you have to reload. This can sometimes make things dificult, as you can't reload until you are entirely out of bullets and the reload button is sometimes not very responsive. You may need to hit the reload key twice for it to work. In the next type of game you need to to the usual, but bullets seem to be unlimited and the birds can pop up and down much faster. This seems to be the most difficult part of the game. There are also five different music tracks you can listen to and you change them by pressing any key from one to five. The only objective seems to shoot as many birds as you can and get the highest score you can. Once the game is over, it's actually over and you're taken back to the hi-score and menu screen. This is a basic shooter and there isn't really all that much to it. It is very fun though and the kind of game you want to play to kill some time, and it's not particularly easy in some parts. At worst it's something you might have seen before but can still enjoy playing, unless I happened to miss something here. On the other hand the music tracks, different gamestages, colorful graphics and messages that pop on the screen now and then help keep it interesting for a while. It's worth the download & great to pass the time with. **AMIGO**

ZX81 games

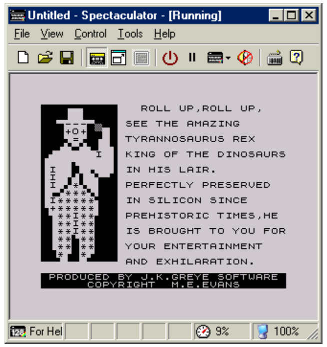
Russell Marks has clearly been very busy. He's ported no less than nine ZX81 games across to the 128K Spectrum, adding in a dithered version of each game's inlay and documentation.

The games are:

- 3D Defender
- 3D Monster Maze
- City Patrol
- Forty Niner
- Frogger
- Manic Miner
- Murgatroyds Revenge
- QS Defenda
- Rocket Man

And you can download them from:

http://emul8.xlabs.sk/topgames/zx81conversions/



```
  ROLL UP,ROLL UP,
SEE THE AMAZING
TYRANNOSAURUS REX
KING OF THE DINOSAURS
IN HIS LAIR.
PERFECTLY PRESERVED
IN SILICON SINCE
PREHISTORIC TIMES,HE
IS BROUGHT TO YOU FOR
YOUR ENTERTAINMENT
AND EXHILARATION.
PRODUCED BY J.K.GREYE SOFTWARE
    COPYRIGHT   M.E.EVANS
```

New Sintech stuff

Sintech are probably the only distributor of new (as in newly designed) Spectrum hardware left. Alongside a very comprehensive range of 'classic' hardware (see advertisement, page 2) they have, over the past few years, marketed new devices such as the MB02 disk interface and the PROFACE PC-Keyboard Interface (which allows you to attach a standard PC keyboard to your Spectrum and experience the 'Decathlon without guilt' sensation).

Now they're adding to their range with three new products, the first - and most exciting - of which is no less than a **Plus D** clone. This, arguably one of the finest third party add-ons from **MGT** (a cut-down version of their ZX-Net compatible **Disciple** interface), gives you full access to a 3.5" DSDD floppy drive, formatting at 780K. The Sintech clone comes uncased, but the £79 price tag does include a floppy drive, PSU and connecting cable. I loved my old +D and I still haven't quite come to terms with the fact that it's dead (I still connect it up from time to time in the hope that it might start working again). If nothing else, I have a case to use if I buy Sintech's new offering, I suppose.

The Plus D is extremely well documented on the Internet. You can read the manual and view the schematics at:

www.worldofspectrum.org/documentation.html

And **RealSpectrum** team **Ramsoft**, who are quite a fan of this interface (RealSpectrum can read +D formatted floppies straight from your PC's 3.5" drive) have produced their own very comprehensive documentation at:

www.ramsoft.bbk.org/tech.html

Also, if you fancy having a go at making your own Plus D clone, you can find some information at:

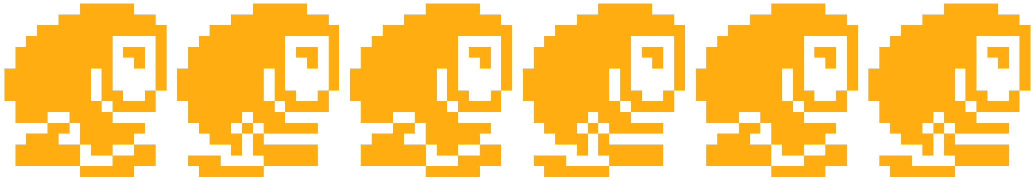
www.worldofspectrum.org/NotThePlusD/

Sintech's other new products are a **VGA-Box** (£30.38) to connect your Spectrum to a standard VGA-PC monitor and an **AV-Video Output Interface**, the price of which has yet to be determined.

www.sintech-shop.de

Egghead 3

Format: ZX Spectrum
Author: Jonathan Cauldwell
Price: Free (original version)/£1.99 (special edition)
Goto: http://members.fortunecity.com/jonathan6/egghead/index.html / www.cronosoft.co.uk



"Egghead in Space" is the third installment of the Egghead Series which you probably remember from CRASH cover tapes. It was finished recently and "Egghead in Space" is the third installment of the Egghead Series which you probably remember from CRASH cover tapes. It was finished recently and was programmed by Jonathan Cauldwell the original author of the first two Egghead games. It is being given away for free at his site (see first link above), but - more importantly - a special edition with new screens and a revamped display is being sold for £1.99 from **Cronosoft,** the new retro software house, making it one of the first new commercial Spectrum releases for years.

Egghead 3: Egghead in Space is a very fun puzzle game (In the style of Dizzy, Giddy 1 & 2 on Amiga and Giddy 3 for PC). The graphics are very cute and well done and color clash is also to a good minimum. The difficulty of the game is not barbaric and irritatingly impossible but not easy either. The difficulty is at a well balanced level getting increasingly harder as you go along but seems to be quite beatable with perseverance, the way games ought to be. Once you've got a handle on the controls and figured out the way the game works and familiarize yourself with your environment and Egghead's movements, you'll be on your way to an even more enjoyable experience. The sound effects suit the game very well, and although there is no option to redefine keys (which I usually like) players should get used to the predefined keys quickly, which are only three (Left , Right & Jump). A nice feature in the game, as it seemed to me when I played it is that after you have lost all your lives and must start from the beginning again, you start with the last object you had before you lost your last life, which many players might consider a nice plus as you won't have to go back into the same rooms and complete them over again, but rather you can avoid many of those rooms and head back to where you left off. I've not beaten the game yet and I don't know what the ending is like, but at the moment the only thing i feel is missing from the game is music. If not some great 128k music it would be nice to have at least some nicely done 48k music even if only on the title screen. Nevertheless this is a very well programmed and designed game that will keep you busy for quite a while. I'm sure it will

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CSS thread: New Spectrum?

I have been reading information regarding a ongoing project which several people are working on regarding a new version of the Amstrad CPC using the new eZ80 50MHz CPU!

I think that if we Spectrum users were to design a similar system it could spark some much needed interest back into the Spectrum hardware scene!

About the only upgraded Speccy I can think of is the +3e project and compatible machines like the Sprinter but a powerful varient would be a massive improvement to the situation.

C64 and Amstrad users are doing so much more than we are and it is really irritating to hear C64 zealots harping on about fast processors, internet access and GUI OSs when we're still talking about Jet Set Willy and Linda Barker!

It is about time we all worked together to ensure the Speccy doesn't become an 'ancient artefact' in the British Museum!

Weetomuncher

Speaking purely for myself here, I just can't get fired up all that much by the prospect of a new commercial 'super spectrum'. The more new features any such machine had would simply make it less a spectrum. I *do* like very much the idea of enhancements that could be made to existing spectrums, but this would only be of interest to us die-hard hardware fans.

If a new machine were brought out, it still would be nothing to match the current platforms for gameplaying - I'm thinking consoles here - so it would do little to attract attention from non-speccy fans. I doubt that anybody would be willing to back such a venture, therefore.

Why would we want such a system? As a viable alternative to a PC? Use the Sprinter then. As a better games machine? Buy a PS2 or whatever takes your fancy. To me, the 'spirit' of the Spectrum is all about working within a set of restrictions - memory, sound, colour clash, etc - and pushing back these boundaries to get a result. A hard disk interface - great. An add-on that gives more video modes - superb. I'm up for all of these, because they take what is and improve on it. *We* appreciate these things because we know just how clever they are, but someone coming to all this fresh would wonder what all the fuss is about.

I've thought about this a lot recently, because actually I do think there might be mileage in the current climate for a new Spectrum, but my idea is not for a super spectrum, rather a re-release of the rubber-keys model.

How could this be viable commercially? Well we all know that retro is 'back in,' so to speak. Retro radios sell for an extortionate amount of money, for example, and then there's all this talk of retro games on mobile phones. The idea centres on a very cheap computer designed along the lines of an original Spectrum 48k that would retail for - if possible - under £25. "Own a classic British computer," etc, etc.

But the key selling point would be the software, and for this I'm thinking games sold on those little credit card sized CDs, with attractive print work to make them collectible. They would be, to all extents and purposes, the new Pokemon cards to be collected - attractive in their own right, with the added function that they can load a game into the new spectrum (or into an original spectrum, of course) via a CD walkman (or whatever) connected to the ear socket. Games could be sold, say, 3 or 4 to a packet at, perhaps, £2 (or whatever works).

Even better still would be a handheld spectrum with an in-built LCD screen, but the cost of this would be likely to push up the console's price considerably (and having been a teacher and still now working in education, I know the hazards of taking valuable electronic equipment into school also!)

Why would we want such a system? If it worked, Spectrums would be trendy again and awareness would be raised (if it worked *really* well we might even see new magazines springing up for a while). Spectrum games would be popular again - everyone will have the chance once more to reflect on what a really good game does actually consist of. A whole new generation of children would have access to a computer - and a very cheap computer - which they can do something with regardless of whether or not they have a piece of software for it (ie, programming, which could even become fashionable again by itself). There would be no need to remove distribution permission on software at WoS since games would be bought for their collector value, leaving 'new recruits' to discover WoS and all its joys. Old cassette software could be loaded into new machines. And so on. In short, by using a trick of fashion, we could introduce a whole new generation of people to the Spectrum. The resources we have available to us at the moment are just superb - wouldn't it be better still if more people were using them?

As an educationalist, I'm very keen to give something to children that is positive, that embraces learning as a goal in its own right and which encourages problem-solving skills. This therefore feels to me like an idea that sits well with both this hat on and my Spectrum fan hat on too.

What do others think? Should I write to Amstrad?